

THE SHIPPING OF ARMY SUPPLIES ON THE HUNGARIAN RIVERS DURING THE WARS OF RECONQUEST AGAINST THE TURKS (1683–1739)¹

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The reconquest of Hungary from the Turks in the late seventeenth century made the use of the Hungarian rivers, first the Danube and then the Tisza (Theiss) as well as their tributaries, both available and necessary for the Hapsburg Empire, especially for the purposes of transporting troops and supplies to the army at the Turkish front. Until then, imperial Danube shipping had primarily involved the Upper Danube and was associated with the imperial salt-mines industry in Upper Austria, run by the Hofkammer (Salzkammergut). State shipping and shipbuilding developed in the Hapsburg Monarchy as a byproduct of the salt-mining industry, in order to transport salt to Linz, Krems and Vienna. This situation changed in 1683 after the Turkish siege of Vienna was overcome and the Turks were driven away from Hungary in a prolonged and bloody war which ended only with the Peace of Karlowitz in 1699, an agreement ratifying Hapsburg rule in the Kingdom of Hungary. From 1684 on, the demand for ships for military purposes grew rapidly, subjecting the state to a permanent shortage of ships and the wood needed to build them.² The shortage was aggravated during the next three periods of fighting in Hungary: 1) the Rákóczy rebellion, a Hungarian national uprising against Hapsburg rule (1703–1711), 2) the war against the Turks in the years 1716–1718, which ended with the Peace of Passarowitz and expanded Hapsburg rule to the Banat and Belgrad, i.e. further than the traditional boundaries of the Hungarian Kingdom, and 3) a less successful war against the Turks in the years 1737–1739, which ended in the loss of Belgrad to the Turks in the Peace of Belgrad. The recapture of Belgrad in 1717 made Danube shipping more important for the Hapsburg Monarchy than ever before. The Danube became the Monarchy's central communication and transport connection, and retained its importance even after the loss of Belgrad twenty years later.

In the following pages I will try to describe the problems of shipping army supplies on the Hungarian rivers during the period of time from the beginning of the wars of reconquest in Hungary in 1683 – which made the Hungarian rivers cardinal lines of communication for the Hapsburg Monarchy – until the Peace of Belgrad, which ended twenty years of Hapsburg hegemony in the Middle Danube and the Sava, and left the Hapsburgs sole rulers of the Kingdom of Hungary and ever-lasting pretenders to Serbia, which this time slipped from their hands.

The great volume of military supplies required for the reconquest of Hungary, and especially the “Oppenheimerische Proviant” – namely army supplies delivered by the Court Jew Samuel Oppenheimer, proportionally to the overall volume of shipped commodities – was indicated in a letter dated October 14, 1692 from the Obristschiffamt (Chief Bureau of Ships) Lieutenant in Vienna³, complaining that the Obristproviantamt (Chief Provision Office) and Samuel Oppenheimer hired foreign sailors for all their deliveries, *und dermaßen ausser Salz und Munition einig andere Keiserlichen Gueth nichts abzufuehren* (and

actually apart from salt and ammunition, there is no other imperial commodity to deliver). But when sailors were needed to transport the troops, said the letter, no foreigner was willing to take part, which caused a lot of anger and resentment among the “Ordinarii Amtsschiffleute,” the sailors regularly employed by the Bureau of Ships. They said that the army should also use these foreign sailors for the task of transporting the troops, *welche Ihnen Ihren Bissen Brodt von dem Mundt entziehen* (who take their piece of bread out of their mouth). The Lieutenant repeated his complaint in a letter dated January 11, 1693: ... *der Herr Von Hochburg, Oppenheimer und andere Lifferanten den Apaldo haben und sich frembder Schueffleith bedienen, disse in einen geringem Werth zu bezablen* (Mr. von Hochburg, Oppenheimer and other suppliers retain their hiring authority and use foreign sailors, **in order to pay them a small wage**).

The Obristschiffamt Lieutenant was trying to force all the suppliers to hire the organized sailors, i.e. those authorized by the Schiffamt, and allow them to continue the journey down to Hungary, instead of hiring foreigners or exchange the expensive Viennese sailors for cheaper sailors in Hungary. At the same time, the sailors in Pressburg refused to allow the passage of ships manned with Viennese sailors. They made the Viennese sailors leave the ships and took their places themselves. The Lieutenant recalled a case that had happened in Pressburg in 1688, when Oppenheimer brought a ship with Viennese sailors there in order to load provisions and then continue the journey down the Danube. The Pressburg sailors demanded that the Viennese get off and, when they refused, threw them into the Danube. The Lieutenant wrote that if he did not come there to arbitrate, sailors would certainly be drowned or killed there.⁴ He was afraid that the Viennese sailors would want to take revenge and that such incidents might be repeated.⁵

Sailors' fights were not the most difficult problem with which the Lieutenant had to cope. The wooden ships used at the time could only float down the river. On their way back, up the river, they were dragged by horses or bulls who made their way along the banks, a practice which usually required certain preparation of the shore to allow the free movement of the draft animals. The return of the ships (“Gegentrieb”) up the Danube was very expensive, and was welcomed only when the ships were relatively new and in good condition, otherwise it would be better to sell them down the river, a circumstance which naturally aggravated the shortage of ships.⁶

On October 25, 1692, the Obristschiffamt Lieutenant reported to the Hofkammer that ... *das Obriste Schiffamt dergestalten in grossen Schueffmangl stebet* (the Chief Bureau of Ships suffers a great shortage of ships), and he requested that the *Keiserliche Zillen Verwahrer* (the imperial boat guards) be ordered to requisition two or three ships, complete with their crews, from each of the 33 salt suppliers (“Salz Fertiger”), and allow them to make deliveries of provisions and ammunition to Hungary.⁷ In a letter dated August 31, 1693, in response to a request by the Buda administration to deliver twelve ships to carry grain and oats that were held up in Buda, the Lieutenant reported that he had this number of ships neither in Buda, Raab or Komorn (Komarom), since they had all been sent to Belgrad loaded with heavy artillery. Besides that, sixty ships which were waiting in Esseg (Osijek) and Voeroes-Marton to be returned to Buda were sent to Belgrad instead, carrying fortification materials and hay. The Lieutenant concluded that he must send the required twelve ships from Vienna empty, an undertaking which would cost the office 240 florins, because there was no hope of returning the ships from Belgrad (which required draft animals and was even more expensive).⁸

Similar difficulties were reported concerning the purchase of rafts, difficulties which were not always the result of objective causes. Samuel Oppenheimer complained on August 18, 1695⁹ that the Countess Forgatsch from Freistall (today Hlohvec in Slovakia), whose

husband Simon Forgatsch had received the Hofkammer villages around the castle of Leopoldstadt (today Leopoldov) on the River Waag (Vah) in June 1695 as a security for a loan he had granted to the Hofkammer, had her men purchase all the rafts coming down the River Waag and refused to sell them en bloc to Oppenheimer's men, ignoring all imperial patents demanding that he receive assistance. In addition, she forbade the raft sailors to work on the rafts transporting flour and oats for the army, threatening them with a fine of 20 fl. – about three months of a sailor's wages.¹⁰ Oppenheimer complained that this behavior by the Countess caused the deterioration of the flour, oats and salt, so that he could not supply the army with the needed provisions, not to mention supplying them on time. Oppenheimer asked the Hofkammer to order the Countess to pay compensation for the damages she had caused him and to order the commander of Leopoldstadt and Trentschin to give him military assistance in the requisition of rafts by force. The Countess was protected by her private Haiduk militia.

Ships were needed for the army not only for deliveries but also for boat bridges. The vessels were connected to each other side by side with boards to allow the passage of troops and animals from shore to shore. Boat bridges were very popular, especially during war times, thanks to the ease with which they could be constructed.¹¹ The floating ships rendered it unnecessary to build a solid base for a bridge: The bridges floated, and if needed, they could open in the middle to allow the passage of sailing ships. On August 8, 1693, the Obristschiffamt Lieutenant noted that: *... die Keiserliche Armee hoechst nothwendig undterhalb Bellgraedt eine Schueeffpruckhen yber die Thonau, welche wenigst 150 Schueeffe erfordert* (the imperial army is in urgent need of a boat bridge on the Danube below Belgrad, which requires at least 150 ships).¹²

The state authority in charge of shipping for civil and military purposes was the Obrist Schiff und Bruecken Amt (Chief Bureau of Ships and Bridges) in Vienna (also called "Feldschiffamt" – Field Bureau of Ships). The "Obrist Schiff und Bruecken Amt" was subordinate to the Hofkammer, the Hofkriegsrat and the Generalkriegskommissariat. It was in charge of supplying ships for state and military purposes, including the supply of ships for boat bridges, building and maintaining the bridges, inspecting and patrolling the waterways and collecting tolls for passage via waterways and bridges.¹³

This office was headed by a Lieutenant who was based at the chief office in Vienna, but traveled to inspect the waterways and the office's facilities in Hungary, such as the ships' anchorages. His reports provide us insight into the conditions of shipping in those days. In 1701, for example, the Obristschiffamt Lieutenant reported to the Keiserliche Generalkriegskommissariat (Imperial General War Commissariat) about the Danube: *... der Gegentrieb nicht nur von Comorn, sondern garr von Baya aus bis anhero sowoll auf Pferdt als Perssonen, ganz practuabl und wohl eingerichtet, man hat auch einiger aus Guess oder Morrast zuueerbauen ganz nichts vonnethen, ausser das die gefoertter underweillen vill, einen Landt auf das andere uebersezt werden, also auch wan die Wasser sehr verfallen, und der Canal an der seithen von der Vestung Raab zu klein wehre, so dient man sich des Mitl Thonau Strom, durch die Schutt bis Presspurg volglic von denen nacher Wien richtet man sich eben nach dem Wassern, wan dises von mitterer Hobe gehet der Gegentrieb an die Schlag Pruckh, da diese aber alzusehr entfallen, gehen dise dem mittern Strom an die sogenannte Fahnstangen ...*¹⁴ (The return of ships up the river ["Gegentrieb"], not only from Komorn [Komarom], but even from Baja up to here [Vienna] with both horses and men is very practical and well-organized. There is no need at all to build protective structures against inundation or swamps, not even a little; besides that the vessels are transferred here and there from one shore to another; therefore when, for example, the water is very low and the channel near the castle of Raab is too small, one uses the middle Danube stream from

Schutt to Pressburg and then, from there up to here, Vienna, one directs oneself according to the water – when it is at a medium level the upriver route goes to the draw-bridge. But when the water gets too low, they go to the middle stream, up to the so-called flagpoles.)

The reconquest of Hungary expanded the activities of the Schiff und Bruecken Amt and shifted it to the Middle Danube, between Pressburg and Belgrad, a situation requiring administrative reorganization. In 1704, one year after the outbreak of the Rákóczy rebellion, a new position – that of “Ober-Bruecken-Hauptman von Ungarn” (Chief Captain of Bridges for Hungary) – was created.¹⁵ The person in this position was in charge of the state ships’ anchorages and the bridges in Hungary, and was responsible for purchasing and supplying ships for boat bridges as well as for keeping the bridges in good condition.

Special anchorages, “Schiffverwahrungen,” were built in the Hungarian ports to accommodate the Feldschiffamt ships. In contracts dated 1716 and later, the army suppliers were obligated to leave the ships, once unloaded, in the following Schiffverwahrungen: in Komárom or Esztergom (Komorn oder Gran)¹⁶, or *zu obgedachten Futak oder Peterwardein befindlichen Schiffverwahrungen*.¹⁷

According to *Die Feldzuege des Prinzen Eugen*, anchorages were built in Pressburg, Raab, Komorn, Gran (Esztergom), Pest and Peterwardein on the Danube, in Esseg on the Drava and in Szegedin, Sentes and Kanizsa (Török-Kanizsa) on the Tisza.¹⁸ The source mentions neither the date of the construction of these anchorages nor the anchorage of Futak; the latter, however, as mentioned above, appeared on supply contracts beginning in 1716.

In several of the supply contracts concluded by Samuel Oppenheimer (died 1703) for Hungary, he was asked to hand the ships over to the Feldschiffamt. No Schiffverwahrungen were mentioned in any of the Oppenheimer contracts known to me or in any of the protocols of the Obristschiffamt in Vienna (1692–1702). They therefore must have been built sometime between 1703 and 1716.

Four types of wooden Danube ships were identified in Samuel Oppenheimer’s contracts as being fit for both purposes, i.e. army provision transports and the building of bridges: Kelheimerin, Arztille, Siebnerin and Sechserin.¹⁹ Unfortunately, the sources available to me from the period under discussion here hardly contained any descriptions or information on the dimensions of these ship types, so that I was required to use sources of a much later date to learn about them. The figures in the later sources sometimes differed a great deal from those in the earlier ones.

In a contract concluded on August 18, 1693 between the Hofkammer and a shipbuilder from Regensburg named Wolf Ziegler, the builder committed himself to build *45 gefaehlte Kellhamberin und 25 grosse Ulmer oder Schwaebin, sambtlich neu und frische wollgebaute Zillen* (45 fit Kelheimerin and 25 big Ulmer or Schwaebin ships, all new and well-built boats) for the *so villen Abfuehrungen des Proviants, Artiglerie, Munition, Feuerwerk und dergleichen Requisiten bey den Obristen Schiffamt* (many deliveries of supplies, artillery, ammunition, fireworks and similar necessities of the Chief Bureau of Ships) within eight weeks, i.e. by October 15th. For building these ships *in kurzer Zeit* (in a short time) Ziegler was promised the price of 70 fl. for each Kelheimerin and 60 fl. for each Ulmer Platte. The only figure mentioned in the contract concerning the size of the ships was their required carrying capacity of 600 to 700 centner (centen, centenarium)²⁰, corresponding to between 33.6 and 39.2 tons for each ship (a centner was equal to 56 kg).

Forty-five years later, the Kammerrat Johann Jacob von Neffzorn concluded a contract – signed on March 20, 1738, and renewed on May 15 of the same year – with five Rittmeister (cavalry captains) from the Hussar unit of the Hungarian National Militia in Komorn for the delivery of flour and oats from the depots in Szönye near Komorn to Semlin, Belgrad

and Semendria on the Turkish front. This document contains a reference to *grosse genante neun Kellhamer Zuelen, deren eine des 1000 bis 1100 oder 1200 Centen Schwaer tragen sollen* (nine large so-called Kellhamer boats, whose carrying capacity was 1000 to 1100 or 1200 centner).²¹ These ships could therefore carry twice as much as those mentioned in the 1693 contract, namely 56 to 67.2 tons.

All the sources agree that the “Kelheimerin” (later called “Kelheimer” or “Kelheimerzille”) was the largest ship on the Danube. In the *Salzkammergutslexikon*, written up in 1768/1769, we find: *Kelhamerzille. Sie kommt wie die Klobzille ausschliesslich fuer die Fahrt auf der Donau in Betracht. Die beiden grosse Zillen mit 2000 centner Ladungsvermoegen unterscheiden sich dadurch, dass die Kelhamerzille aus langen und dicken Laden zusammengesetzt und noch etwas grosser ist wie die Klobzille.*²² (It [the Kelhamerzille] is adequate, like the Klobzille, only for Danube shipping [i.e. not for the smaller rivers]. The two big ships with a carrying capacity of 2000 centner²³ differ in that the Kelhamer is made of longer and thicker trunks and it is a little bit bigger than the Klobzille).

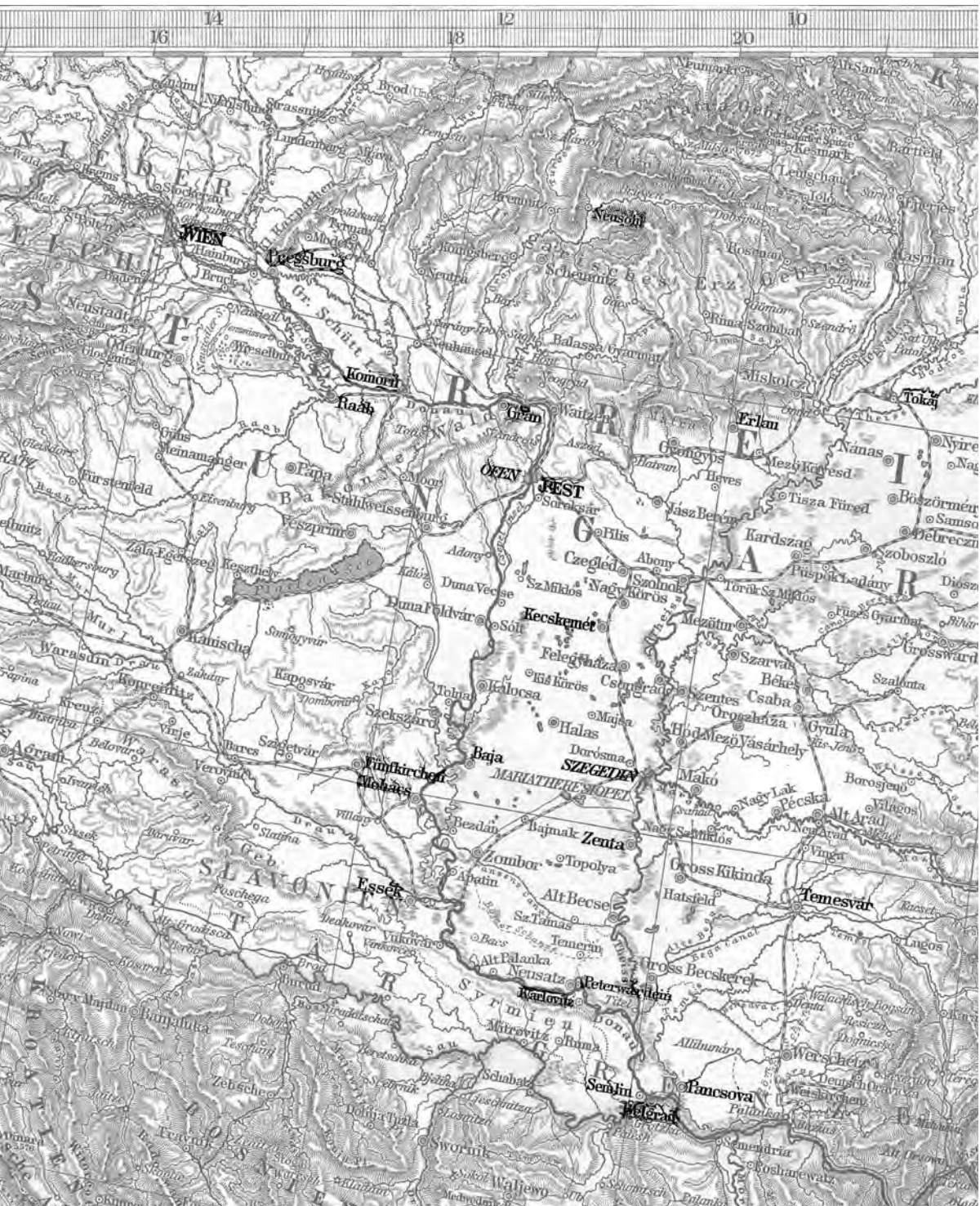
We thus learn that the Kelheimerin or Kelheimerzille of the second half of the eighteenth century could carry about three times as much as the one specified in the contract of 1693, and about twice as much as the ships mentioned in 1738. We must conclude that at least during the eighteenth century, if not earlier, the ship types were not bound to rigid specifications, and the builders continually made bigger and stronger ships, so that the changes in size were quite significant. Taking that into account, we must conclude that other dimensions mentioned in the later sources, aside from those pertaining to carrying capacity, were much smaller in the late seventeenth and early eighteenth century.

The dimensions of the Kelheimerin were not mentioned in the *Salzkammergutslexikon*, but the Klobzille was said there to be as many as 20 klafter long, 2.5 klafter wide and 4 feet tall. Using the Kammergutsklafter, equal to 1.785 meter, we arrive at a length of 35 to 36 meters, a width of about 4.5 meters and a height of about 1.2 meters.²⁴ The Kelheimer, according to the *Lexikon*, was a little bigger than that. For the Kelheimerin Neweklowsky mentioned different sets of measurements from different sources, e.g. a length of 22 klafter (close to 40 meters), width of 18 to 19 feet (about 6 meters) and height of 5 feet (about 1.5 meter).²⁵ As mentioned above, I must conclude on the basis of the much smaller carrying capacity of the Kelheimerin ships built in the late seventeenth and early eighteenth centuries, that their dimensions were smaller than those mentioned by the *Salzkammergut*, and certainly smaller than those mentioned in the *Salzkammergutslexikon*.

A superstructure was built on the bigger part of the Kelheimerin’s deck, making it especially suitable for grain deliveries. I did not, however, find figures on the size of the superstructure.

The above-mentioned Ulmer or Schwaebin Platte ordered by the Obristschiffamt but not referred to in the contracts of Samuel Oppenheimer known to me differed from the Kelheimerin in size and form: While the Kelheimerin had sharp edges, the Ulmer Platte had flat ones, which gave it its name. According to Neweklowsky, the Ulmer or Schwaebin Platten, like other ships of the Platte type, were often built only for one trip down the river, to be sold there as firewood.²⁶ This might explain why this type of ship was not mentioned in Oppenheimer’s contracts as being among those to be handed over to the Feldschiffamt.²⁷

With regard to the Arzzillen (also Arzzillen or Erzzillen), there are widely differing figures: a length of 20 to 26 meters and measurements of width and height which differ even more. Neweklowsky concludes that the term referred to different types of ships.²⁸ As we saw in connection with the Kelheimerin type, however, different figures may represent different periods, because all the ship types gradually became larger, not only the Kelheimerin. I tend to think that since they were referred to in the contracts along with the Kelheimerin



as *Starken, zu dem Brueckenschlag tauglichen Schiffen*²⁹ (strong ships, fit for the building of bridges), a bigger ship than the one mentioned above was meant, a ship closer in size to the Kelheimerin, i.e. with a length of about 30 meters and a width of more than 4, and definitely not smaller than a Sechserin, which was, as indicated by the sources, the smallest ship used for bridges at the time.

We are better informed about the Siebnerin and Sechserin. They were the most common types used for the transportation of salt³⁰ and were therefore regularly manufactured by order of the Salzkammer. The *Salzkammergutslexikon* notes that the length of the Siebnerzille was *17 Klafter 2 Schuh bis 18 Klafter* (31 to 32 meters), of the Sechserin (Sechserzille) *15 Klafter 5 Schuh bis 16 Klafter* (about 28 to 28.6 meters). The width of a Siebnerin was presumably 10 schuh (10 feet – more than 3 meters) and of a Sechserin 9 schuh (less than 3 meters). Neweklowsky noted that both ship types were later built in bigger sizes. He also assumed that the measurements were altered to conform to the special limitations of the ship's prospective place of service.³¹

A report of December 24, 1701 by the Obrist Schiffamt Lieutenant reveals some of his considerations in choosing a certain type of ship for the delivery of supplies. He needed 80 ships in order to transport a considerable cargo of grain from the Danube through Belgrad up the Sava River to Siseck. The Lieutenant said that he chose Siebnerin ships and not Sechserin ships for this purpose because the Siebnerin could carry at least 500 centner (28 tons) on its way up the river (in den Gegentrieb), while the Sechserin could carry only 250 to a maximum of 300 centner, and using it did not save much manpower since the Sechserin required a crew of ten, while the Siebnerin required twelve sailors for a load twice as big. He would not use the Kelheimerin or the Gamsen because it was too hard to pull them up the river without horses (he probably had only bulls to pull the ships³²).

The Lieutenant planned to request ship builders to build forty ships that would be ready to sail when the water began to rise, namely in the spring when the snow began to melt. For the other forty ships he planned to wait for the Salzkammer ships carrying salt from the Salzkammergut to Vienna and Hungary beginning at the end of March. Although the Lieutenant did not say so, his choice of Siebnerin as opposed to bigger ships such as the Kelheimerin may also have been made because the Siebnerin ships, being used regularly for salt deliveries, were available in large numbers and at a relatively low price, especially if they were already to be found in Hungary, having unloaded their cargoes of salt.

With regard to the sailors' wages, the Lieutenant offered to pay them a total sum of money for the entire trip, including the delivery of the grain and the return of the empty ships. This way, he wrote, since they knew their reward, they would strive day and night to quicken the delivery. On the other hand, he claimed, if they were paid monthly, the deliveries would be accomplished very slowly.³³

In several supply contracts signed between Samuel Oppenheimer and the Hofkammer, Oppenheimer was obliged to hand over the supply ships – once unloaded— to the Feldschiffamt, with all their equipment, if they were – as was usually the case – of the four types specified above, or of other types fit for the building of bridges.³⁴ This instruction pertained not only to ships given to Oppenheimer by the Obristschiffamt in Vienna, but also to those furnished by Oppenheimer himself: *welche nemblich er Judt selbst verschaffen wirdt, und ausser deren, so gleich vorigen Jahren Ihme aus denen Keiserlichen Aemtern gegeben werden, mit dem zugehoer dem Keiserlichen Feldtschiffamt uebergeben ...* (namely which

Ausschnitt einer Karte Osteuropas von August Heinrich Petermann. Aus: Handatlas ueber alle Theile der Erde und ueber das Weltgebaeude, hrsg. von Adolf Stieler. Gotha 1874.

he, the Jew, will deliver himself, and in addition to them, those given to him from the imperial offices as in former years, with their equipment, would be handed over to the Imperial Field Bureau of Ships).³⁵ Rafts were also included in this article.³⁶ The only ships not subject to this obligation were the so-called Hingeberin ships, (literally: “meant to be abandoned, given away”). In Oppenheimer’s contracts Hingeberin were defined as *zu dem gemeinen Veruehren gewidmeten Schiffen* (ships assigned for general transportation).³⁷ According to the *Salzkammergutslexikon* they were old ships which were too worn to continue their service as salt carriers for long. They were therefore handed over to the Obristschiffamt in Vienna to be sent for their last trip down the Danube carrying supplies to the army in Hungary, and then sold there as firewood.³⁸

The article repeated in Samuel Oppenheimer’s contracts stated the following: *... solle die Lifferung in starcken zu dem Prueeckenschlag tauglichen Kehlheimerin und Arztzillen, auch anderen also brauchbar, und die samben Sechserin and Siebnerin, nicht aber nur zu dem gemeinen Veruehren gewidmeten Schiffen, oder sogenannten Hingeberin, dissfahls eingerichtet und vollzogen nach dem Ausladen aber, sothanige Schiff, mit dero zugehoerigen, dem kayserlichen Veldt Schiffamt uebergeben werden*³⁹ (the delivery being made on strong Kelheimerin and Arztzillen ships adequate for the building of bridges, as well as other useful ships and all the Sechserin and Siebnerin ships, but not ships assigned for general transportation or the so-called Hingeberin, and, once the ships were unloaded, they were to be handed over to the Field Ship Office in fully equipped condition).

The contracts promised Oppenheimer a compensation for each ship which he handed over to the Feldschiffamt, to be calculated according to the type of the ship, and for each raft according to the type of wood it was made from. The Hofkammer promised to compensate Oppenheimer according to the rates common in Vienna, although the payment was made in Hungary where price levels were much lower: *Die Schiffe, Zuehlen und Floesser, so in das Veldt Schiff Amt mehr angezogener massen ueberlassen werden, nach unterschied der Schiffs-Sorten und des Holzes bey denen Floesser, in der alhier zu Wienn Amts gebrauchiger Einloesung dem Contrahent guettzumachen*⁴⁰ (the contractor would be compensated for the ships, boats and rafts handed over, fully equipped, to the Field Bureau of Ships, according to the various ship types and, as regards the rafts, according to the type of wood, at the price customary here in the Vienna office).

In the contract dated March 15, 1698, Samuel Oppenheimer committed himself not only to supplying the combat units in Hungary during the six months of fighting from April to September but also assumed the supply responsibilities of the provision officers of the Danube River and Upper Hungary, namely the Tisza River. His new and wider responsibilities also had their implications with regard to the shipping of supplies. In this contract, the Hofkammer promised that the Imperial Bureaus of Ships would help Oppenheimer with the ships, would take care to weigh and measure the quantity of flour and oats delivered by Oppenheimer to the Hungarian depots on the spot and without delay, issue the required supplying license (Lieferschein) and receipts, and help him in every way to complete his missions, otherwise he would not be obligated to implement even the smallest delivery: *... mit dem expressen Versprechen, so febrn Ihme Oppenheimer in ein, oder anderen nicht solte zur gehalten werden, er nicht allein aus aller Obligation und Verantwortung, sondern auch die geringste Lifferung zuthuen, nicht gehalten seyn solle*⁴¹ (... with the explicit promise, to the extent that one or the other [obligations] towards Oppenheimer were not kept, not only would he be free from every obligation and responsibility, but he would not be obligated to make even the smallest delivery). This detailed obligation on the side of the Hofkammer implied that, as a rule, the procedures for taking on cargo and producing the required documents were rather slow and caused the suppliers delays and losses.

A special article was devoted in this contract to the deliveries on the Tisza. Oppenheimer was entitled to receive whatever rafts he needed at any point on the Tisza River free of charge, in order to transport supplies and make deliveries to Szegedin and further on. The costs of loading and sailing were his responsibility. On the basis of the contract we can assume that Oppenheimer had demanded that the rafts be brought to Tokey at the government's expense, that this demand had been rejected, and that he was allowed instead to use the rafts that were already there at no cost. Oppenheimer's hard bargaining in the matter of rafts was probably influenced by incidents such as the one in 1695 with the Countess Forgatsch (see above).

Despite the fact that, according to the contracts, all costs and risks were Oppenheimer's responsibility, the Hofkammer released Samuel Oppenheimer from responsibility with regard to damages – the irretrievable sinking of the cargo – due to hostilities or shipwreck: *... auf sein eigenen Unkosten und Gefahr, auss genohmben allein die feundliche, wie auch, wan etwa, so Got verhuette, zu Wasser gaehling ein ungestimbe sich dergestalt erhoeben wuerde, dass mit menschlicher Hilff und Vorsichtigkeit die schiffladung nit aus Land zu bringen, noch sonsten zu versichern, und also mithin etwas verunglickhen und zu Grund gehen moechte*⁴² (... at his own costs and risk, with the sole exception of hostilities, and also when, so help us God, something too vehement to be resisted happens on the water, that with human help and care the cargo cannot be brought to land, or otherwise be secured, in other words if something may be hurt or sunk).

Samuel Oppenheimer died in 1703, the year the Rákóczy rebellion broke out in Hungary. Like all other army suppliers, Samuel's son Emanuel – who took over the firm – now had to cope with the difficult situation of the rebellion in Hungary. What made things even harder for the suppliers than the war against the Turks was the fact that now the front was everywhere —an attack by rebels was possible anywhere in Hungary, and supplies and imperial depots were a popular target. The question of security became crucial.

On December 7, 1705, Emanuel Oppenheimer concluded a delivery contract for supplying daily provisions to several Hungarian garrisons and units. In its seventh article, the contract stated: *... zu desto sicherer Einliefer-und-Beyschaffung des Praestandi eine zulaengliche Convoye bey fuerwehrender Unruehe in Hungarn, ausser welcher sye aber kunftighin nicht zuleisten ist, verschaffet werde*⁴³ (... for a safer delivery and provision of the supplies, competent convoys would be provided during the turmoil in Hungary, and there would be no need in future to procure other convoys). In this article the state took the responsibility of protecting the deliveries with military convoys instead of leaving it to the suppliers – which amounted to recognition by the authorities of the state of war in Hungary, although they still defined it merely as “Unruehe” (turmoil). The Emanuel Oppenheimer contract dated March 1, 1708, for the supply of oats and hay to the castle of Pressburg, also stated his right to be accompanied by a convoy “der Sicherheit halber” (for the sake of security).⁴⁴ Yet the actual exercise of this right to security was apparently not easy. In a contract dated February 17, 1710, the fifth article said: *... seinen abschickenden Bedienten so wohl in der hin und her Reise als auch bey Veranstaltung des Transports durch die militares die noettige Sicherheit verschaffet werden*⁴⁵ (... his [Oppenheimer's] servants would receive the required protection through army men, on their trip there and back, as well as while accomplishing the transportation).

This detailed article indicates difficulties for Oppenheimer's men in getting the security convoys they needed. While the army commanders recognized the importance of delivering supplies to the units in rebellious Hungary, where the success of the rebels depended mainly on blockading and cutting supplies to the imperial castles and garrisons, they definitely placed less importance on accompanying the empty boats and their crews on their

way back home. Oppenheimer could not afford to rely upon the good will of the local commanders and had to involve the higher authorities: In a contract dated April 4, 1710, the Hofkammer was declared responsible for informing the Hofkriegsrat that, in order to accomplish the delivery, Oppenheimer's men would get all the help, protection and security they needed: ... *will mann von Seithen der Kayserlichen Hofcammer nicht ermangeln, an den Kayserlichen Hofkriegsrath gelangen zulassen, damit, wo es noettig seyn moechte, zu Vollfuehrung diser Lieffierung und Transport seyn des Oppenheimers darzur bestelten Leuthen alle erforderliche Assistenz, Bedeckhung und Sicherheith ertheillet werde.*⁴⁶

During the rebellion, in addition to the security convoys the suppliers received ships from the Bureau of Ships at no cost, but only on the condition that they later left them, empty, at one of the imperial anchorages. The suppliers had to pay only the operating costs (Schiffmueth), namely, the sailors' wages and sometimes the costs of equipping the ships for the trip. In the delivery contract of Emanuel Oppenheimer dated December 7, 1705, for the supply of daily provisions to the imperial garrisons and units in Hungary during the years 1705–1708, a period when the rebels controlled most of Hungary, the eighth article said: ... *sollen Ihme Oppenheimer zu Erstreitung des Transports zu Wasser benoethigte Schiffe, und darzur gehoerige Schiffahrtszeug bey jedes mahligen Erfordernus aus dem Kayserlichen Obristen Schiff Amt gegen Quittung und wider zurueckhstellung, wie dan er Oppenheimer auch alle die Schiffmueths und Schiff zuerichtungs Uncosten selbst zutragen hat, ausgefolgt werden*⁴⁷ (... the ships required to accomplish the transportation on waterways and the additional equipment should be given to Oppenheimer by the Imperial Chief Bureau of Ships whenever needed in return for a receipt and the obligation to return them, while Oppenheimer must also pay the costs of equipping and operating the ships himself). On the basis of this contract it is not clear whether giving the ships back meant giving them back to the Bureau of Ships at their destination or returning them to the place of departure. Other contracts were more explicit: According to the contract concluded with Emanuel Oppenheimer and Lazrus Hirschl on September 26, 1707 regarding the supply of flour to the imperial army in Hungary, the suppliers were required to return the ships after each delivery to the Field Bureau of Ships in Pressburg.⁴⁸ In another contract, dated May 5, 1711, between the Hofkammer and two Jews from Esztergom, Isaac Abraham and Jacob Hirschl, concerning the supply of flour to Esztergom and grain to Buda, they were promised the receipt of ships at no cost from the Bureau of Ships in Esztergom, but they committed themselves to paying the operating costs and bringing the ships back up the river. The ships promised them were "ausgetaefelte Schiffe," ships whose superstructures were panelled on the inside with boards, to be filled with bulk cargoes of grain, usually oats: ... *warzu Ihnen doch die ausgetaefelte Schiffe gratis von Seithen des Schiff Amts zu gedachten Grann hergegeben, sye Liferanten aber schuldig seyn sollen, die Schiff Mueth auf Ihre eigene Uncosten zu bezahlen auch den Gegentrieb gedachter Schiffen zu bestreiten* ...⁴⁹

When the rebellion was over, the state no longer promised the suppliers all the ships needed for their deliveries, and the suppliers were required to pay for the ships given them by the Imperial Bureau of Ships. In an Emanuel Oppenheimer contract of March 14, 1713 for the supply of flour and oats to the imperial forces in Hungary we find: ... *auch die darzur erforderliche Schiffe, in so weithers thunlich, und gegen sein des Oppenheimers babrer Bezahlung abgefolgt werden sollen*⁵⁰ (... the ships needed for that purpose should also be given, to the extent possible, in return for a cash payment by Oppenheimer).

One year later, however, Emanuel Oppenheimer succeeded in improving the conditions once again: In a delivery contract for the supply of daily provisions to all garrisons in Hungary in 1715–1717, signed on September 25, 1714, he was once again promised that he would receive ships from the Obrist Schiffamt or from the anchorages in Hungary merely

in return for the commitment to give them back undamaged. The state was still not obligated to give him all the ships needed for the delivery, but only those ships available at the respective locations, when he let the state know that he was short of ships. The costs of equipping and operating the ships were his to bear.⁵¹

In this three-year contract, the Hofkammer (court treasury) committed itself to compensating Oppenheimer for damages caused by force majeure, including hostilities and crime, but Oppenheimer was obligated to inform the General Kriegskommissariatamt, or one of its subordinate commissars in Hungary, whenever he or his men were in danger, and to request and wait for security measures or a convoy. If he failed to do so, the treasury was by no means obligated to compensate him for his losses.⁵²

In the summer of 1716 a new war with the Turks broke out in southern Hungary, and special supply missions were required. On December 6 and 12, 1716, Emanuel Oppenheimer and Wolf Schlesinger signed contracts to supply flour and oats to Futack or Peterwardein, where Prince Eugen's forces were spending the winter, waiting to conquer Belgrad the following summer. Their first delivery was to arrive by the end of December if sailing was still possible, since there was considerable danger that the river would freeze, at least partially. The suppliers were to receive ships from the office in Vienna and leave them, once unloaded, in Futack or Peterwardein. Both contracts included an identical article, saying that if on account of the water being too low or frozen, or because of a shortage of ships for the delivery, the contractors missed the first date of delivery, they would still receive the first payment and all other payments on time. If the freezing of the river blocked the continuation of the journey, the suppliers would be helped to a safe lodging at one of the places where a Provision Commissar was located.⁵³

All of the wartime contracts (July 1716 – July 1718) indicated a severe shortage of ships for the transportation of supplies, causing constant delays in deliveries. The suppliers received the required ships from the state anchorages too late and could not deliver on the dates fixed in their contracts. Contracts signed during the war, like the two mentioned above, usually included an article stating that a delay in delivery due to a delay in the receipt of the ships from the state anchorage, without negligence on the part of the supplier, would not cause an alteration in the dates of payment fixed in the contract and would not entail sanctions against the supplier such as the retainment of his guaranties or reduction of a fixed part of his payment (Arrhae, or Assignationsarrhae, as it was called). A contract with Herz Loeb Manasses dated January 11, 1717, for example, stated in its sixth article: *da wider alles Verhoffen oesters besagten Juden Manasses die Ihme zu geben verschprochene Schiffe in rechter Zeit nicht gestellet wurden, mithin derselbe auch obbemelten Terminen, nicht praestieren und darueber die behoerige Lueferschein beybringen konte, so solle solchenfalls gleichwollen die stipulirte Zahlung nicht alterirt, und er Judt Manasses auf beybringende autentische Attestata, dass nemblich der Haaber zur Abfuhr bereith lige, und aus ermanglung der Schueffe an seine Behoerde nicht abgefuehrt werden koenne, mit Extradirung der zuegesagten Bancal Assecurationen keines wegs aufgehalten werden*⁵⁴ (if contrary to all expectations the frequently mentioned Jew Manasses did not receive the ships promised him in time, and was therefore unable to deliver such an oats supply on the dates mentioned above, in such a case the required payment still should not be altered, and this Jew Manasses, by submitting authentic documents, namely that the oats were ready for delivery, and because of shortage of ships could not be delivered to its destiny, would by no means be kept from receiving his bank guaranties). In other contracts with Herz Loeb Manasses we find another version: *... der Haaber aber zur Abfuhr in Bereitschaft lige, ohne Abzug der Assignations Arrhae entrichtet, auch entzwischen ueber solche Zahlungs Fristen die Bancal Assecurationen ihme Manasses ausgehaendiget*⁵⁵ (... but if the oats were ready for delivery,

Manasses would receive payment without any reduction [Assignationsarrhae; see above] and his bank guaranties would also be given him between the fixed payment dates). In a contract with Wolf Schlesinger dated December 23, 1717, the sixth article stated: *da wider Verhoffen mehr erwehnten Schlesinger die behoerige Schiffe nicht in rechter Zeit verschafft oder zugestellet wurden, mithin ab solchen Abmangel derselbe seine Liferung in den stipulirten Terminen vollziehen, und die Liferschein beybringen koente, so solle solchen fahls auf producirend authentische Attestata, dass das Gutt zur Abschikh-oder-Ablieferung bereith lige, widerhalter Schlesinger mit Extradirung deren Bancal Decreten nicht aufgehalten, auch die Zallung so woll in Capital, als Interesse nicht alterirt: sondern bey denen verschprochenen Terminen, es allerdings sein verbleiben haben*⁵⁶ (if, contrary to expectations, the required ships were not supplied or delivered to the frequently mentioned Schlesinger in time, and as a result of this failure he could not accomplish his delivery on the required dates and submit a supply receipt, in such a case by producing authentic documents proving that the goods were ready for transport or delivery, Schlesinger would not be kept from receiving his bank orders, and also the payments, both capital and interest, would not be altered, but would rather be made on their promised dates).

Direct evidence of the shipping problems which arose during this war are found in a report by Harrucker⁵⁷ of June 10, 1717, written to the Hofkammer from the camp in Peterwardein one day before the army left for Titl and Panczova, heading to cross the Danube to Belgrad.⁵⁸ He complained about the lack of money, which *sowohl der Transport hinabwaerts, aus welchen die Armee subsistiren, als der Gegentrieb der laehren Schiffe voellig gehemet muss werden* (necessarily causes the complete hindrance even of downriver transportation, from which the army subsists, not to mention the return of the empty ships). Naturally, if the ships were not returned, new deliveries to the front were much delayed. Harrucker also reported several damaged oats ships on which part of the load of oats had spoiled due to the heat and could not be used or delivered, while the portion which had not spoiled was left undelivered in the ship with the spoiled oats.

For deliveries to Futack or Peterwardein, i.e. to the front, the suppliers received the state-owned ships at no charge, but in return for the obligation to leave them, once unloaded, at the anchorage of Futack or Peterwardein: *die zu solchem Transport erforderliche, und inspecie zur Haaber Ablieferung ausgetaeflete Schueffe, nebst denen zuegehoerigen Requisiten von dem Kayserlichen Obrist Schueff Amt, jedoch aber auch mit der expressen Reservation und Bedingung, dass selbe nebst allen Zuegehoerungen nach beschehener Lueffierung sogleich widerumben denen zu obgedachten Futack oder Peterwardein befindlichen Schiff Verwahrungen gegen Quittung widerumben ueberliefert und ohne Abgang zurueckh gestellet werden, verabfolget*⁵⁹ (the Imperial Chief Bureau of Ships will supply the ships required for such a transportation, and especially the ships with panelled superstructures [“ausgetaefelte Schiffe”] for oats deliveries, along with the equipment belonging to them, but on the explicit reservation and condition that the ships would be returned along with all their equipment to the anchorage in the above-mentioned Futack or Peterwardein, in return for a receipt, and would be disposed there undamaged immediately after delivery).

For deliveries to the front during this war with the Turks, the state not only gave the suppliers ships but also covered the operating costs. This arrangement applied only to deliveries to the front. On deliveries to other places, such as Emanuel Oppenheimer's bread supplies to castles and garrisons all over Hungary, the equipment and operation of the ships were at the suppliers' expense: *die Zurichtung und Schoeffmuths Unkosten aber seynt von Ihme, wie alle andere zur Proviantirung aufgehende Expensen selbst zutragen*.⁶⁰ When Oppenheimer made deliveries to the newly recovered city of Belgrad, however, no equipment or operation costs were mentioned.⁶¹ If it happened that, during a trip, the suppliers

were ordered by the Imperial Field Provision Office (Keiserliche Feldproviandamt) to unload part of the cargo or all of it in one of the depots along the way, such as Buda or Baja, instead of taking it to the front, the suppliers had to return the sum of money corresponding to the cost of delivery from the actual place of unloading to the front in cash to the provision office. In many contracts we find an article similar to the sixth article of Abraham Ulmo's contract for the supply of oats to the front, dated February 21, 1717: *aber in Fall man an Seithen des Kayserlichen Proviandh Ambts, obbedachter Haaber quantum pro parte, oder auch in toto zu Futack oder Peterwardeyn nicht, sondern zu Baya und Ofen, oder in einem anderen herobigen Magazin pro deposito haben wollte, er Judt Ulmo schuldig und verbunden seyn solle, sodann den Betrag deren Ablieferungs oder Schueffmueths Unkosten, so nemblich von Ofen respective und Baya, oder einem anderen heroberen Magazin bis mehrerwehnten Futack und Peterwardeyn erforderet werden, obbesagtem Kayserlichen Feld Proviandhambt paar zu ersezen und zubezahlen*⁶² (but in the event that someone from the Imperial Provision Office wanted part of this quantity of oats, or even all of it, not for Futack or Peterwardein, but for Buda or Baja or another depot up the river as a reserve, in such an event this Jew Ulmo should be responsible and obligated to compensate and pay to the above-mentioned Imperial Field Provision Office in cash the cost of the delivery or operating costs required from Buda, Baja or another depot up the river to Futack or Peterwardein).

A transportation price of six kreuzer per centner of flour was mentioned in some contracts. In a contract dated December 7, 1716, Wolf Schlesinger committed himself to supplying the field units in Hungary with flour, and delivering it to Buda, Baya or Esseg (Osi-jek). Yet he was promised that if he took the flour to Futack or Peterwardein, he would get an extra six kreuzer for each centner of flour.⁶³ Since the original possible destinations were quite far from each other, it is unlikely that the six kreuzer reflected the additional distance. More probably they were paid as an extra bonus for delivery to the front. In two contracts signed on July 14, 1717, one with Abraham Spizer and the other with Wolf Schlesinger, each of them for the delivery of 20,000 centner of flour to the units in Hungary, the suppliers committed themselves to delivering half the quantity of flour with their own ships or rafts, the other half with ships given them by the Obristen Schiffamt. For each centner delivered in their private ships, the suppliers were promised 2 florins and 21 kreuzer, and for each centner of flour delivered in imperial ships they were promised 2 florins and 15 kreuzer.⁶⁴ In other words, the additional payment for each centner of flour transported on the suppliers' own ships amounted to six kreuzer. Again this price might not reflect the real cost of transportation, but may have served as an incentive or bonus for the suppliers to use their own ships in this time of shortage.

The suppliers were usually asked to leave the ships, having unloaded them, in the anchorage nearest to their destination, usually Buda, Futack or Peterwardein. There were, however, a few exceptions. In a contract concluded on December 15, 1716 with Lazar Hirschl's successors for the supply of flour and oats to Buda in the springtime, the contractors were to receive ships from the anchorage of Komarom or Esztergom at no charge – on the condition that, if the ships were not needed for a further trip from Buda down the river, they would return them at their own expense to one of the two anchorages in the same condition in which they had received them.⁶⁵ This arrangement resembles that in the above-mentioned contract of 1711 with Isaac Abraham and Jacob Hirschel of Esztergom, who were also obliged to return the ships to the place of departure at their own expense.

The severe shortage of ships probably continued for some time after the war was over. In a contract for the supply of flour to the recaptured city of Belgrad, signed on April 13, 1719, Wolf Schlesinger committed himself to delivering the flour in his own ships, and neverthe-

less to give the vessels, once the flour had been unloaded, to one of the imperial ships anchorages *ohne entgelt*, namely without payment. Thus in reality it was a delivery of flour – and ships – to the front. The transportation costs, on the other hand, were paid by the treasury.⁶⁶ In another wheat and barley supply contract which Wolf Schlesinger concluded with the Graf von Mercy – conqueror and governor of the newly recovered Banat – on February 1, 1719, Schlesinger was required only to bring the wheat from Fuenf-Kirchen (Pecs) to Mohacs. The further transportation of the wheat from Mohacs to the Banat was to be carried out by an officer sent to Mohacs from the Banat and at the expense and risk of the Banat. Regarding the barley, Schlesinger had to have it delivered to Vienna, but only on the condition that he would obtain ships and sailors from the Schiffamt there immediately, and they would transport the barley to the Banat at the expense of the Banat.⁶⁷

In the supply contracts concluded during the period of almost twenty years between the two Turkish wars, 1719–1737, I found no reference to the question of shipping the provisions. It seems that during times of peace the authorities were less involved in the shipping and left it to the suppliers themselves or to other entrepreneurs. Not until a new war with the Turks over Belgrad broke out – as we read in a supply contract: *wegen dermahligen gefaehrlichen Kriegs Coniuncturen und haubtsaechlich annoch in Hungarn grossierenden Epidemischen Kranckheiten, all und jedes mit doppelter belohnung und Uncosten bestritten werden muss*⁶⁸ (due to the present dangerous war circumstances, and especially to the epidemics still spreading in Hungary, everything must be procured with double wages and costs) – were the authorities once again concerned with the shipping of army supplies.

In a contract of August 18, 1739 regarding the supply of one hundred thousand metzen of barley and oats to Futack or Belgrad for the ongoing military action, the contractors did not come from the circles of the Court Jews, but were three Jewish merchants from Belgrad: Aron and Judas Israel and Abraham Koinisch, members of the Mayrische trade company. They were guaranteed the receipt of fifteen fully equipped ships from the Schiffamt. If the ships were not given to them immediately, they were not obligated to carry out the deliveries.

They were also promised that, in order to prevent damages and loss of time, when they reached one of the depots along the way the cargo would be unloaded on the spot, and in the event of dangers causing them to leave immediately, they would receive other usable empty ships right away in order to continue their trip without interruption: *Tertio, hat Mann ihnen Contrabenten versprochen, das an das loeblichen Kriegscommissariat und respective Provianth Amt des weitere von einer hoch loeblichen keyserlichen Hof Cammer intimirt, und verfueget werden solte, damit die bey denen Magazinen ankommende geladene Schiffe zum groesten Schaden, und Verlust der Zeit nicht so lang aufgehalten, sondern sogleich entweder uebernommen, und ausgeladen, oder, im Fall die Nott es erforderte ueber das determinirte Orth ob Periculum Morae zu verschickhen, denen Liferanten in instanti andere laehre brauchbare Schif dar und abgegeben werden solten, damit ohne Unterbruch die Liferungen continuiren koennen.*

In this contract the treasury was committed to pay the damages in the event that the cargo was abducted or destroyed due to hostilities, while – in contrast to earlier contracts – all other cargo damages or even shipwrecks were not compensated for by the treasury: *in Fall aber ein oder andere hardt Futter von disem stipulirten Quanto a 100,000 Metzen durch feindliche Partheyen oder Streyfereyen solte hinweeg genohmen oder zu grunde geschossen werden, were der daraus resultirende Schaden nicht Ihnen Lifferanten, sondern dem Aerario bezumuthen und zurechnen, die uebrige aber Ihnen Contrabenten zeit ihrer aufhaltende Liferungen auf den Wasser eraigende Unglickhs Zufaeble und Schaden sie alleinig ertragen underdulden muessen*⁶⁹ (but in case that this or other hard fodder of the required

quantity of 100,000 metzen were taken away or shot down by hostile factions or in skirmishes, not the supplier would answer and account for the damages caused, but the treasury, but the remainder of the accidental cases and damages caused to the suppliers during their deliveries on the water they alone must bear).

After the delivery they could return the ships to the Imperial Bureau of Ships *nach der monatlicher vollendeter Administrirung* (after the monthly inspection was accomplished; a procedure which I did not encounter in other sources). If the ships were destroyed by storms or on account of negligence, however, the suppliers had to pay their value in cash to the treasury: *dass sie solche anwiderumb nach der monatlicher vollendeter Administrirung dem keiserlichen Schifambt einantworten und abgeben koennen, ein Faehl aber ein so andere Schif zeit wehrender Transport durch Gewitterungen solte ruiniret, oder durch Hinlaessigkeit deren Cormanoschen⁷⁰ vernuzlichet werden, haben die Contrahenten darvor dem Aerario die baare Bezahlung zu leisten.*

Another mention of the transport of supplies in 1739 referred to the River Waag. In a contract signed on February 3 of that year, Hirschl Abraham was permitted to use the empty boats that came down the Waag from the “Rosenberger Amt” (Rosenberg, today Ruzomberok in northern Slovakia) to deliver flour to the imperial depot in Szoenyé, near Komárom, in return for a fair price. The supplier was also required to bear the costs of loading and unloading the cargo.⁷¹

During these fifty years and more of shipping military supplies to Hungary, several consistent factors governed state policy: The constant shortage of ships, severely aggravated during war times, was the rule. The state tried to alleviate the shortage partly by the more expensive means of ordering new ships, usually by the cheaper means of forcing the major users of ships, namely the salt and army suppliers, to surrender their ships or sell them to the state under market price: The ship owner was not paid the full value but rather “compensated” by the authorities. In order to facilitate the method of the forced purchase of ships and make the vessels more available for civil and military uses, the Bureau of Ships built and maintained ship anchorages in Hungary, especially along the Danube. During war times the state supplied the ships for provisioning the army and provided military convoys to accompany the cargo ships; war damages were compensated by the treasury. Essentially, however, the task of supplying the army – even in war times and including the delivery of supplies by ship – remained a private enterprise: It was organized and implemented by private suppliers who often used their own ships, and if they wished to use the state’s ships they had to request and wait for them patiently, and it was their responsibility to inform the authorities if they needed military convoys to ensure their safety on their way to the bloody battlefields.

Appendix: Index of place names

<i>German name</i>	<i>present name</i>	<i>present country</i>
Baja	Baja	Hungary
Belgrad	Beograd	Yugoslavia
Erlau	Eger	Hungary
Esseg	Osijek	Croatia
Fünfkirchen	Pécs	Hungary
Futak (Futok)	Futog	Yugoslavia
Gran	Esztergom	Hungary
Karlowitz	Sremski Karlovci	Yugoslavia
Kecskemet	Kecskemét	Hungary

Komorn (Comorn)	Komárom (Komarno)	Hungary/Slovakia
Mohacs	Mohács	Hungary
Neusohl	Banská Bystrica	Slovakia
Ofen	Buda	Hungary
Pancsova	Pancevo	Yugoslavia
Passarowitz	Pozarevac	Yugoslavia
Pest	Pest	Hungary
Peterwardein	Petrovaradin	Yugoslavia
Pressburg	Bratislava	Slovakia
Raab	Győr	Hungary
Rosenberg	Ruzomberok	Slovakia
Semendria	Smederevo	Yugoslavia
Semlin	Zemun	Yugoslavia
Senta	Zenta	Yugoslavia
Szegedin	Szeged	Hungary
Temeschburg	Temesvar	Rumania
Tokaj	Tokaj	Hungary

Notes:

- 1 This article is one chapter of a dissertation entitled "The Activity and Settlement of Jewish Army Suppliers in the Kingdom of Hungary after its Reconquest from the Turks" which I am writing at the Institut fuer oesterreichische Geschichtsforschung of the University of Vienna, under the supervision of Professor Dr. Karl Vocelka.
- 2 Ing. Carl Schraml: *Das oberoesterreichische Salinenwesen vom Beginne des 16 bis zur Mitte des 18 Jahrhunderts*. Vienna 1932, p. 246f.; Ernst Neweklowsky: *Die Schifffahrt und Floesserei im Raume der oberen Donau*, Vol. 1. Linz 1952, p. 40f.; also see later references to primary sources.
- 3 Kriegsarchiv, Vienna: *Protokollen der Obristschiffamt Wien*, 1692-1702. For information on the Obristschiffamt and the Lieutenant's office, see below. The phrase "Oppenheimerischen Proviants-abfuehrungen" appeared in these protocols on p. 6, record dated July 26, 1692.
- 4 *Ibid.*, record of March 30, 1693, p. 32f.
- 5 *Ibid.*, also leicht zu glauben, das diese Glueth noch in den Aschen verborgen, und die alhiesige Schueffleuth auf gleich Minz bezallung gedenccken derften (so it is easy to believe that these embers are still hidden in the ashes, and the local sailors must have thought of paying with the same coin).
- 6 Neweklowsky: *Die Schifffahrt*, Chapter: "Die Gegenschiffahrt," pp. 291-315.
- 7 *Protokollen der Obristschiffamt*, pp. 11-13.
- 8 *Ibid.*, p. 64f.:... dass ich besagte Schiffe zu Ofen nicht habe, in Ursach mit Beladung der schweren Artigl, Von daselbst auch Raab und Comorn alle Schiffe beladen, und gegen Bellgradt abgefuehrt worden, so habe zu Oesseckh und Voeresmarton in die etliche 60 Schiffe stehen gehabt, willens solche in dem Gegentrueb nacher Ofen zubringen. Es seind dise aber unter Faschinen und Schanz-khoerbe und noch eine grosse Anzahl Schiffe unter Hey gegen Bellgradt abgefuehrt worden. Und weillen dermahls alle Proviant Lieferungen gleich durch aus, bisgegen Bellgradt abgehen. Als muessen gedachte 12 Schueffe boechst nothwendig von hier aus laebre dahin abgefuehrt werden, welche Schueffmueth sich per 240 fl. ganz genau accordiert belauffe, auf den Schueff gegentrueb von Bellgradt gar kheine Hoffnung zu machen.
- 9 Hofkammerarchiv, *Hof Finanz Hungary*, r. Nr. 371, August 20, 1695.
- 10 A daily wage of 15 Kreuzer, a quarter of a florin, for a sailor, also in Freistall, was mentioned in a lawsuit dated August 1731. *Monumenta Hungariae Judaica*, Vol. III, p. 626, quoted from *Benignae Resolutiones*, August 30, 1731, Magyar Orszagos Leveltar (Hungarian State Archives).
- 11 *Die Feldzuege des Prinzen Eugen*, Vol. I. Wien 1876, p. 249.
- 12 *Protokollen der Obristschiffamt*, p. 55, record dated August 8, 1693.
- 13 *Die Feldzuege des Prinzen Eugen*, Vol. I, pp. 200-202.
- 14 Kriegsarchiv, *Protokollen der Obristschiffamt in Wien*, 1692-1702.
- 15 *Die Feldzuege des Prinzen Eugen*, Vol. I, pp. 200-202.
- 16 See e.g. Hofkammerarchiv, *Kontrakte & Reverse*, C-160, Dec. 15, 1716.
- 17 See e.g. Hofkammerarchiv, *Kontrakte & Reverse*, (Emanuel Oppenheimer, C-167, Dec. 6, 1716, Wolf Schlesinger, C-166, Dec. 7, 1716, C-162, Dec. 12, 1716, etc.).

- 18 Ibid., p. 202.
- 19 See *Kontrakte & Reverse*, B-278 (January 3, 1695), B-279 (January 19, 1695), B-316 (December 15, 1695), in Hofkammerarchiv, Vienna.
- 20 A draft of the contract is found in Kriegarchiv, Vienna: *Protokollen der Obristschiffamt in Wien*, 1692-1702, pp. 60-62.
- 21 Hofkammerarchiv, *Kontrakte & Reverse*, C-1336, 1337.
- 22 The *Salzkammergutslexikon* is found, in the original as well as a copy by Schraml, in the Oberoesterreichische Landesarchiv in Linz. It is clear from this quotation that the Klobzille was considered to be a special ship type. It was described in the *Salzkammergutslexikon* as follows: *eine grosse, von aus gebackten (geklobenen) Holzer zeugte Schiffe, die an der Donau gebraucht werden. Sie messen in der laenge bis 20 Klafter, in der Breite 2 1/2 Klafter, in der Tiefe aber 4 Fuss und tragen eine Ladung von 1700 bis 2000 Zentner*. Neweklowsky did not agree with this definition. He claimed (pp. 292-295) that the Klobzille was not a special ship type, but a name for various ship types used for the trip up the river (der Gegentrieb). He thought (based on the Grimm dictionary) that the name Klobzille did not come from Kloben (log), but from Klo as in Klovieh, namely hoof, therefore a ship pulled up the river by horses. Neweklowsky therefore rejected the description of the Klobzille in the *Salzkammergutslexikon*, blaming the error on Schraml. In fact Schraml only copied and rearranged the lexicon, which had been composed by Georg Lang in 1768/69, for the practical needs of the Hofkammer, and the work is to be regarded as highly credible. Moreover, there are other sources indicating the Klobzille was a special ship type, such as the *Protokollen der Obristschiffamt*, p. 51f., a letter to the Hofkammer dated July 6, 1693, asking for *10 grosse Schiffe, als Kloozillen und grosse Tyroller Gambsen*, to be handed over to the Bureau of Ships in Buda in order to deliver limestone for building fortifications in Belgrad, rather than Sechserin and Siebnerin ships, which could hardly carry 300 centner, i.e. were not large enough for such heavy material. The planned delivery was from Buda to Esseg and Peterwardein, namely down the river, so that Neweklowsky's explanation does not correspond at all.
- 23 Viennese centner consisted of 100 Viennese pfund (pounds). A Viennese pfund was equal to 0.56 kg; therefore a centner was equal to 56 kg, 2000 centner to 112 tons.
- 24 Oberoesterreichisches Landesarchiv, Linz, *Salzkammergutslexikon* 1768/69 (formerly in Salzoberamtsarchiv, Gmunden, Hs. No. 10).
- 25 Neweklowsky, p. 179.
- 26 Neweklowsky, pp. 186, 190.
- 27 On the other hand, according to *Die Feldzuege des Prinzen Eugen*, Vol.16, p. 70, "Plaetten" were also used for bridges.
- 28 Neweklowsky, p. 196f.
- 29 See *Kontrakte & Reverse*, B-278 (January 3, 1695), B-279 (January 19, 1695), B-316 (December 15, 1695), in Hofkammerarchiv, Vienna.
- 30 Neweklowsky, p. 200.
- 31 Ibid.
- 32 *Protokollen der Obristschiffamt Wien* (1692-1702). Unlike horses, which were used and killed in huge numbers on the battlefields, bulls were used only as draft animals. It seems that the army had a surplus of bulls, since they were offered to Oppenheimer in return for money: On the protocols of the Obristschiffamt in Vienna, a record of January 15, 1700 noted that Samuel Oppenheimer had to pay 18,000 florins for 300 draft bulls (Fuhrwesen Oxen), but he offered only 7,180 florins and said that he would pay no more. Another record of September 17, 1701 stated: *und biss die Gelter fallen bey der handt zubehalten, müssen mit dem Juden Oppenheimer geschlossen worden, den ganzen abgedanckhten Veldt Pruckhsstandt bezahlen zu khoennen, das er gegen Uebernehmung der Fuebrwesens Oxen 9000 fl. erloegen solle* (and until the money was at hand, one should have come to terms with the Jew Oppenheimer, in order to be able to pay the absolutely destitute department of war bridges, that he [Oppenheimer] should pay 9000 florins, in return for draft bulls). The matter was never concluded with Oppenheimer as planned.
- 33 Ibid.
- 34 Hofkammerarchiv in Vienna, *Kontrakte & Reverse*, B-278 (January 3, 1695); B-279 (January 19, 1695); B-316 (December 15, 1695); B-360 (February 1, 1697).
- 35 *Kontrakte & Reverse*, B-360, February 1, 1697.
- 36 *Kontrakte & Reverse*, B-316: *sothanige Schiffe auch mit dero zuegehoerungen, wie oben schon gemeldet worden, sambt denen Floessern, dem Keiserlichen Veldt Schifft Amt uebergeben werden* (ships of this kind together with their equipment, as mentioned above, **including the rafts**, would be handed over to the Field Bureau of Ships).
- 37 E.g. Samuel Oppenheimer's supply contract of January 3, 1695 (Hofkammerarchiv, *Kontrakte & Reverse*, B-278): *... zu dem gemeinen Verfuehren gewidmeten Schiffen, oder sogenannten Hingeberrinnen ...* (the ships assigned for general transportation, or the so-called Hingeberrinnen). In Samuel Oppen-

heimer's contract of February 1, 1697 (B-360), the less common form – Hergeberinen – appeared, with the same meaning.

- 38 In the *Salzkammergutslexikon* the term “Hingeberzille” appeared: *Hingeberzille sind diejenige Zillen, welche bereits 4 und 5 Jahre zur Salzabfuhr gebraucht worden, mithin schon ziemlich schlecht, und binzu in die Laenge nicht mehr tauglich sind, sofort aber noch das letzter mal mit Salz bey Donau in Nieder Oesterreich abgefuehrt, und sodann dem K & K Obrist Schiffamt in Wien zur endlichen Abnutzung uebergeben werden.* (Hingeberzille are the boats which have already been used for 4 or 5 years for the transportation of salt, consequently in rather bad condition, and not fit for longer use, yet sent for the last time with salt to Lower Austria on the Danube, and handed over to the I & R Chief Bureau of Ships in Vienna for final use.) The Obristschiffamt Lieutenant also mentioned *jene von dem Gmundnerischen Salz-Camer Gueth yberlassene 58 Hingeberin und ausgediente Gemeinstath Siebnerin Zillen; Protokollen der Obristschiffamt Wien*, p. 48, record dated June 27, 1693.
- 39 Hofkammerarchiv in Vienna, *Kontrakte & Reverse*, B-278 (January 3, 1695); B-279 (January 19, 1695); B-316 (December 15, 1695); B-360 (February 1, 1697).
- 40 *Kontrakte & Reverse*, B-316 (December 15, 1695). Similar versions appeared in the other contracts.
- 41 *Kontrakte & Reverse*, B-393, March 15, 1698.
- 42 *Kontrakte & Reverse*, B-89, B-113, B-139, B-179.
- 43 Hofkammerarchiv, *Kontrakte & Reverse*, B-621.
- 44 Hofkammerarchiv, *Kontrakte & Reverse*, B-679.
- 45 Hofkammerarchiv, *Kontrakte & Reverse*, B-723.
- 46 Hofkammerarchiv, *Kontrakte & Reverse*, B-727.
- 47 Hofkammerarchiv, *Kontrakte & Reverse*, B-621.
- 48 Hofkammerarchiv, *Kontrakte & Reverse*, B-668.
- 49 Hofkammerarchiv, *Kontrakte & Reverse*, B-759.
- 50 Hofkammerarchiv, *Kontrakte & Reverse*, C-52.
- 51 Hofkammerarchiv, *Kontrakte & Reverse*, C-140.
- 52 Ibid. These conditions were repeated almost unchanged when the contract was prolonged for another year on November 15, 1717. Hofkammerarchiv, *Kontrakte & Reverse*, C-223.
- 53 Hofkammerarchiv, *Kontrakte & Reverse*, C-167, C-162.
- 54 Hofkammerarchiv, *Kontrakte & Reverse*, C-176.
- 55 Hofkammerarchiv, *Kontrakte & Reverse*, C-243.
- 56 Hofkammerarchiv, *Kontrakte & Reverse*, C-226.
- 57 Hofkammerrath and “Proviantobristlieutenant” Johann Georg Harrucker was in charge of the Proviantamt from 1708 on, and personally handled the supplies for Hungary during this war. In return for his special efforts during the war he was ennobled in 1718. See *Die Feldzuege des Prinzen Eugen*, Vol. 16, p. 74f.
- 58 Hofkammerarchiv, HF Ung. Rote Nr. 496.
- 59 This article is the third in Emanuel Oppenheimer's contract dated December 6, 1716, Hofkammerarchiv, *Kontrakte & Reverse*, C-167. Almost identical articles appeared in almost every supply contract which I found from this war period.
- 60 Hofkammerarchiv, *Kontrakte & Reverse*, C-223, November 15, 1717.
- 61 Hofkammerarchiv, *Kontrakte & Reverse*, C-224, December 5, 1717.
- 62 Hofkammerarchiv, *Kontrakte & Reverse*, C-187.
- 63 Hofkammerarchiv, *Kontrakte & Reverse*, C-166.
- 64 Hofkammerarchiv, *Kontrakte & Reverse*, C-206.
- 65 Hofkammerarchiv, *Kontrakte & Reverse*, C-160.
- 66 Hofkammerarchiv, *Kontrakte & Reverse*, C-287.
- 67 *Monumenta Hungariae Judaica*, Vol. III, pp. 253-255.
- 68 Hofkammerarchiv, *Kontrakte & Reverse*, C-1312.
- 69 Ibid.
- 70 Ibid. The meaning of “Cormanoschen” is unknown to me.
- 71 Hofkammerarchiv, *Kontrakte & Reverse*, C-1349.

Die Verschiffung von militärischem Nachschub auf den ungarischen Flüssen während der Türkenkriege (1683–1739)

Zusammenfassung

Die Rückeroberung Ungarns durch die Habsburger Monarchie im späten 17. Jahrhundert bedeutete eine neue Phase in der kaiserlichen Schifffahrt: Sie ließ aus der Monarchie das »Donau-Imperium« entstehen und machte die ungarischen Flüsse, nicht nur die Donau, sondern auch die Tisza (Theiß) und die kleineren Flüsse, zu maßgeblichen Kommunikationswegen des Reiches der Habsburger. Von besonderer Bedeutung war die Verschiffung von militärischem Nachschub auf den ungarischen Flüssen während der Rückeroberung Ungarns von den Osmanen während der Türkenkriege.

Die zur Versorgung der Heere eingesetzten Schiffe waren flache Holzboote, die lediglich flußabwärts treiben konnten. Flußaufwärts mußten sie von Pferden oder Ochsen gezogen werden – ein kostenintensives und zeitaufwendiges Unterfangen. Zwar wurden die Schiffbauverfahren weiterentwickelt und während des 18. Jahrhunderts, einer Blütezeit dieser Schiffe, immer größere, breitere und stärkere Fahrzeuge konstruiert, doch blieb das Transportverfahren das gleiche wie in den Jahrhunderten zuvor: mit der Strömung flußabwärts, den Strom wieder hinauf mit Zugtieren. In einigen Fällen lohnte es nicht, den Weg zurück wieder anzutreten, so daß die Schiffe in Ungarn verkauft oder schlicht zurückgelassen wurden. Mitunter verblieben sie auch in Ungarn, um dort als Schiffbrücken zu dienen, eine weitere sehr wichtige militärische Verwendung von Holzschiffen.

Der hohe Bedarf und die Schwierigkeiten, die Transportmittel wieder zurückzubringen, führten zu einer permanenten Knappheit an Schiffen, insbesondere in Kriegszeiten. Der immer und vor allem in Kriegszeiten von einer Blockade der Nachschubtransporte bedrohte Staat versuchte die Lieferung von Schiffen sicherzustellen. Zu diesem Zweck wurden vorzugsweise entlang der Donau Ankerplätze gebaut und unterhalten, an denen eigene Schiffe und solche von Salz- und Nachschublieferanten versammelt wurden. Aber trotz dieser Maßnahmen war die Knappheit in Kriegszeiten immer noch gravierend, und die Regierung mußte den Lieferanten finanzielle Anreize, kostenlosen Schiffsraum und militärische Konvois anbieten, damit der Nachschub die Front erreichen konnte.

Le transport des renforts militaires sur les fleuves hongrois durant les guerres de l'Autriche contre les Turcs (1683–1739)

Résumé

La reconquête de la Hongrie par la monarchie des Habsbourg à la fin du 17^{ème} siècle impliqua le début d'une nouvelle phase dans la navigation impériale: elle fut à l'origine de «l'Empire du Danube» né de la monarchie, et transforma les fleuves hongrois, non seulement le Danube mais aussi la Tisza et de plus petits fleuves, en un réseau de voies de communication primordiales pour le royaume des Habsbourg. Une grande importance fut attachée au transport des renforts militaires sur les fleuves hongrois, lors de la reconquête de la Hongrie pendant les guerres contre les Turcs.

Les bateaux utilisés pour approvisionner les armées étaient des embarcations en bois plates, ne pouvant que descendre les fleuves. Pour les remonter, ils devaient être tirés par des chevaux ou des bœufs; un procédé coûteux et long. Bien que les techni-

ques de construction se soit développée et qu'au cours du 18^{ème} siècle, ces bateaux connurent leur apogée, que des embarcations de plus en plus larges et puissantes aient été construites, le procédé de transport demeura le même qu'aux siècles précédents: descendre le fleuve avec le courant, le remonter avec des bêtes de halage. Dans certains cas, le voyage de retour n'en valait pas la peine, si bien que les bateaux étaient revendus en Hongrie ou tout simplement abandonnés. Ils restèrent aussi en Hongrie afin d'y servir comme ponts de bateaux, une autre utilisation militaire très importante des bateaux en bois.

Les besoins élevés en moyens de transport et les difficultés pour les faire revenir menait à une permanente rareté de bateaux, en particulier en temps de guerres. En raison de la menace de blocus pesant sans cesse sur le transport des renforts, surtout en temps de conflits, l'état tenta d'assurer la livraison de bateaux. À cet effet, des ancrages furent établis et entretenus, de préférence le long du Danube, permettant à ses propres bateaux et à ceux des fournisseurs de sel ou de l'armée de s'y réunir. Mais malgré ces mesures, la pénurie en temps de conflits était toujours préoccupante et le gouvernement devait offrir aux fournisseurs des avantages financiers, des bateaux gratuits et des escortes militaires pour que les renforts puissent atteindre le front.